ABSTRACT

The tripeptide glycine-proline-glutamine (GPE) may be administered before, or usually after, injury to reduce damage to the central nervous system. GPE appears useful for neuronal rescue particularly but not exclusively within the hippocampus. Advantages of GPE include: (a) that it crosses the blood-brain barrier, so is effective by injected peripheral administration, (b) it is unlikely to challenge the immune system, (c) it is cheap, and (d) its therapeutic ratio is high. GPE may also be infused into the CSF. It may be administered prior to parturition or elective brain or cardiac surgery. Transdermal routes may be useful for chronic neural disorders. The CNS of mammals (including foetal mammals) after trauma including hypoxic/ischaemic experimental insults showed reduced damage under GPE protection as measured by histological assessment of cell damage or death and regional shrinkage.